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4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: TC-5548

QC ABSTRACT

NAME OF WORK: Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Block(400*150*200)	BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
		COMPRESSIVE STRENGTH	One Test		1	1
7	KERB	Core Compressive strength	One Test		1	1
		Corrected Cylinder Compressive strength	One Test		1	1
		Equivalent Cube Compressive strength	One Test		1	1
8	Kerb(100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1

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Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	CP-2022-09-20-20 **Date: 02-05-22**
Project Name	:	Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)
Agency	:	M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064
Customer's Reference	:	BBMP/EE/YNK D/EPMT-08/W.O/107/2021-22
Date of Receipt	:	30-04-22
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11) 1988 IS 4031 Part 1 (RA 2021) DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, (RA 2018) Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, (RA 2019) Determination of Soundness, Clause 5, Clause 6 IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, (RA 2019) Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11, (RA 2019)DETERMINATION OF DENSITY , Clause 6
Date of test	:	30-04-22
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.92	–
2	Finess by Air permeablity method (m^2/kg,Min)	288.2	225m^2/kg, Min
3	Density (gm/cc)	3.14	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	160 minutes	Not less than 30 minutes
6	Final Setting time	255 minutes	Not more than 600 minutes
7	Soundness (I.e Chatelier's Method)	1.0mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

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Date.....
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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Page 1/1
****End of Report****

Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2022-09-20-20** **Date: 28-05-22**
Project Name	:	Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)
Agency	:	M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064
Customer's Reference	:	BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22
Date of Receipt	:	30-04-22
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, (RA 2019) Determination of Compressive Strength, Clause 6
Date of test	:	30-04-22
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	29.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.0N/mm^2	Not less than 53 N/mm^2

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF PRECAST COVER SLAB

Lab ID : CP-2022-09-20-20 **Date: 14-05-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 10-05-22

Sample Type /Size : Precast Cover Slab - 100mm Thick

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete

Date of test : 10/05/2022

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
1	Cover Slab-1	75.51	100.48	1.116	4477	80.9	18.1	16.8	21.0
2	Cover Slab-2	75.49	100.52	1.122	4475	82.3	18.4	17.1	21.4
3	Cover Slab-3	75.50	100.51	1.118	4476	81.5	18.2	16.9	21.2

• The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF PRECAST COVER SLAB

Lab ID : CP-2022-09-20-20 **Date: 14-05-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 10-05-22

Sample Type /Size : Precast Cover Slab - 230mm Thick

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete

Date of test : 10/05/2022

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
1	Cover Slab-1	200.56	230.36	3.119	31586	692.0	21.9	20.4	25.5
2	Cover Slab-2	200.82	230.54	3.128	31668	695.5	22.0	20.4	25.5
3	Cover Slab-3	200.94	230.69	3.163	31706	720.5	22.7	21.1	26.4

• The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE KERB STONE

Lab ID	:	**CP-2022-09-20-20** **Date: 14-05-22**
Project Name	:	Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)
Agency	:	M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064
Customer's Reference	:	BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22
Date of Receipt	:	10-05-22
Sample Type /Size	:	CC Kerb Stone/ 450*165*400mm
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete
Date of test	:	10/05/2022

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	Kg	(Sq.mm)	(KN)	(N/mm2)	(N/mm2)	(N/mm2)
1	A	100.01	165.51	2.864	7854	142.1	18.1	18.1	22.6
2	B	100.03	165.49	2.793	7857	145.2	18.5	18.5	23.1
3	C	100.01	165.50	2.815	7854	145.1	18.5	18.5	23.1

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20 **Date: 11/06/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 16-05-22

Customer ID : Drain Bottom Raft- Andra Layout - 4th A Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 11/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-Andra Layout - 4th A Cross Road	M20	14/05/2022	11/06/2022	150.42 X 150.54 X 150.45	22644	8.312	538.9	23.8	23.5
2	Drain Bottom Raft-Andra Layout - 4th A Cross Road	M20	14/05/2022	11/06/2022	150.42 X 150.54 X 150.45	22644	8.331	518.6	22.9	
3	Drain Bottom Raft-Andra Layout - 4th A Cross Road	M20	14/05/2022	11/06/2022	150.32 X 150.54 X 150.35	22629	8.345	536.3	23.7	

• The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-09-20-20** **Date: 24/05/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, IIIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 19-05-22

Customer ID : Drain Bottom Raft- Andra Layout - 4th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/05/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-Andra Layout - 4th Cross Road	M20	17/05/2022	24/05/2022	151.96 X 151.77 X 149.70	23063	8.841	418.3	18.1	18.2
2	Drain Bottom Raft-Andra Layout - 4th Cross Road	M20	17/05/2022	24/05/2022	150.51 X 150.91 X 150.46	22713	9.037	409.5	18.0	
3	Drain Bottom Raft-Andra Layout - 4th Cross Road	M20	17/05/2022	24/05/2022	150.46 X 150.41 X 151.00	22630	8.563	417.3	18.4	

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಆಯುಕ್ತರು ಆಡಳಿತಾಧಿಕಾರಿ
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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20 **Date: 27/05/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 23-05-22

Customer ID : Drain Bottom Raft- Attur Lake Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 27/05/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Bottom Raft-Attur Lake Road	M20	20/05/2022	27/05/2022	149.35 X 151.00 X 149.49	22551	8.562	410.8	18.2	18.3
2	Drain Bottom Raft-Attur Lake Road	M20	20/05/2022	27/05/2022	149.98 X 149.79 X 151.11	22465	8.219	421.1	18.7	
3	Drain Bottom Raft-Attur Lake Road	M20	20/05/2022	27/05/2022	151.20 X 150.58 X 150.17	22768	8.457	410.1	18.0	

• The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20 **Date: 15/06/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 20-05-22

Customer ID : Drain Side Wall - Andra Layout - 4th A Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 15/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Side Wall - Andra Layout - 4th A Cross Road	M20	18/05/2022	15/06/2022	150.44 X 149.05 X 150.42	22423	8.171	534.6	23.8	23.2
2	Drain Side Wall - Andra Layout - 4th A Cross Road	M20	18/05/2022	15/06/2022	149.84 X 150.04 X 151.49	22483	8.522	505.9	22.5	
3	Drain Side Wall - Andra Layout - 4th A Cross Road	M20	18/05/2022	15/06/2022	149.97 X 149.93 X 149.37	22484	8.538	523.9	23.3	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20 **Date: 18/06/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 23-05-22

Customer ID : Drain Side Wall - Andra Layout - 4th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 18/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall - Andra Layout - 4th Cross Road	M20	21/05/2022	18/06/2022	149.96 X 151.79 X 150.62	22764	8.111	533.2	23.4	23.2
2	Drain Side Wall - Andra Layout - 4th Cross Road	M20	21/05/2022	18/06/2022	150.11 X 151.23 X 151.53	22701	8.958	515.4	22.7	
3	Drain Side Wall - Andra Layout - 4th Cross Road	M20	21/05/2022	18/06/2022	150.37 X 151.82 X 150.42	22829	8.442	537.4	23.5	

* The results obtained are satisfactory as per standard requirements

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

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Date
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R KARTHIK RECHAN
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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-09-20-20** **Date: 17/06/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 23-05-22

Customer ID : Culvert Bottom Raft- Veersagar Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 17/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Bottom Raft-Veersagar Road	M20	20/05/2022	17/06/2022	149.43 X 149.75 X 149.84	22376	8.458	525.4	23.5	23.1
2	Culvert Bottom Raft-Veersagar Road	M20	20/05/2022	17/06/2022	150.84 X 151.48 X 151.25	22848	8.951	515.5	22.6	
3	Culvert Bottom Raft-Veersagar Road	M20	20/05/2022	17/06/2022	149.92 X 150.72 X 149.77	22595	8.101	525.3	23.2	

• The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-09-20-20** **Date: 21/06/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 26-05-22

Customer ID : Culvert Side Wall - Veersagar Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 21/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Side Wall - Veersagar Road	M20	24/05/2022	21/06/2022	151.04 X 151.83 X 150.87	22933	8.321	533.8	23.3	23.0
2	Culvert Side Wall - Veersagar Road	M20	24/05/2022	21/06/2022	149.27 X 149.67 X 149.10	22341	8.569	500.1	22.4	
3	Culvert Side Wall - Veersagar Road	M20	24/05/2022	21/06/2022	151.08 X 151.26 X 149.00	22852	9.093	536.6	23.5	

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20

Date: 15/06/2022

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 10-06-22

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 15/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	PCC	M15	08/06/2022	15/06/2022	149.10 X 151.67 X 151.63	22614	9.046	287.8	12.7	12.5
2	PCC	M15	08/06/2022	15/06/2022	150.79 X 151.93 X 151.09	22909	8.484	284.6	12.4	
3	PCC	M15	08/06/2022	15/06/2022	151.39 X 151.36 X 150.40	22914	8.180	279.8	12.2	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20 **Date: 06/07/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh). No:1265, Ground Floor, IIIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 10-06-22

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/07/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	08/06/2022	06/07/2022	150.56 X 150.57 X 149.43	22669	8.685	388.8	17.1	17.2
2	PCC	M15	08/06/2022	06/07/2022	150.56 X 151.70 X 149.57	22840	8.896	389.3	17.0	
3	PCC	M15	08/06/2022	06/07/2022	150.23 X 150.05 X 150.02	22542	8.782	390.5	17.3	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2022-09-20-20** **Date: 11/06/2022**
Project Name	:	Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)
Agency	:	M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064
Customer's Reference	:	BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22
Date of Receipt	:	06-06-22
Customer ID	:	Cement Concrete Pavement - Doddabetta halli Cross road-2
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M30 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl 5
Date of test	:	11/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Doddabetta halli Cross road-2	M30	04/06/2022	11/06/2022	151.28 X 149.27 X 151.55	22581	8.416	642.3	28.4	27.1
2	Cement Concrete Pavement - Doddabetta halli Cross road-2	M30	04/06/2022	11/06/2022	149.79 X 149.61 X 151.51	22410	8.682	604.0	27.0	
3	Cement Concrete Pavement - Doddabetta halli Cross road-2	M30	04/06/2022	11/06/2022	149.66 X 150.48 X 149.30	22521	8.179	586.4	26.0	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2022-09-20-20 **Date: 13/06/2022**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, IIIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer's Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 08-06-22

Customer ID : Cement Concrete Pavement - Doddabetta halli 1st A Cross road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 13/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Doddabetta halli 1st A Cross road	M30	06/06/2022	13/06/2022	151.82 X 150.15 X 150.74	22795	8.237	651.3	28.6	27.3
2	Cement Concrete Pavement - Doddabetta halli 1st A Cross road	M30	06/06/2022	13/06/2022	149.55 X 151.32 X 150.72	22630	8.185	613.2	27.1	
3	Cement Concrete Pavement - Doddabetta halli 1st A Cross road	M30	06/06/2022	13/06/2022	151.73 X 150.51 X 150.38	22837	8.348	601.0	26.3	

• The results obtained are satisfactory as per standard requirements

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TEST RESULTS OF GRADATION FOR GSB
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2022-09-20-20** **Date: 15-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 13-06-22

Type of Mix : GSB (Granular Sub Base)

Date of Test : 13-06-22

Oven Dry Weight : 10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec. Limit Vide Table 400.1 MORTH Specification
75	0	0	0.0	100.0	100
53	602	602	6.0	94.0	80-100
26.5	1278	1880	18.8	81.2	55-90
9.5	1746	3626	36.3	63.7	35-65
4.75	1625	5251	52.5	47.5	25-50
2.36	2814	8065	80.7	19.4	10-20
0.85	1142	9207	92.1	7.9	2-10
0.425	445	9652	96.5	3.5	0-5

TESTS ON FILLER SCREEN MATERIALS

Sl no	Particulars	Test results	Spec.Limit Vide Table
1	Liquid Limit, %	21.98%	Maximum 25
2	Plasticity index, %	Non plastic	Maximum 6

* The results obtained are satisfactory as per standard requirements.

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End of Report

TEST RESULTS OF GRADATION FOR GSB
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2022-09-20-20** **Date: 17-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 15-06-22

Type of Mix : GSB (Granular Sub Base)

Date of Test : 15-06-22

Oven Dry Weight : 10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec. Limit Vide Table 400.1 MORTH Specification
75	0	0	0.0	100.0	100
53	622	622	6.2	93.8	80-100
26.5	1244	1866	18.7	81.3	55-90
9.5	2385	4251	42.5	57.5	35-65
4.75	2214	6465	64.7	35.4	25-50
2.36	2146	8611	86.1	13.9	10-20
0.85	689	9300	93.0	7.0	2-10
0.425	385	9685	96.9	3.2	0-5

TESTS ON FILLER SCREEN MATERIALS

Sl no	Particulars	Test results	Spec.Limit Vide Table
1	Liquid Limit, %	22.50%	Maximum 25
2	Plasticity index, %	Non plastic	Maximum 6

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2022-09-20-20** **Date: 20-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B B Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 18-06-22

Type of Mix : WMM (Wet Mix Macadam)

Date of Test : 18-06-22

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	530	530	4.8	95.2	95-100
22.4	2245	2775	25.2	74.8	60-80
11.2	1869	4644	42.2	57.8	40-60
4.75	2145	6789	61.7	38.3	25-40
2.36	1369	8158	74.2	25.8	15-30
0.6	820	8978	81.6	18.4	8-22
0.075	1765	10743	97.7	2.3	0-5

• The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-RW-2022-09-20-20 **Date: 20-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 18-06-22

Type of Mix : WMM (Wet Mix Macadam)

Date of Test : 18-06-22

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	358	358	3.3	96.7	95-100
22.4	2144	2502	22.7	77.3	60-80
11.2	2015	4517	41.1	58.9	40-60
4.75	2245	6762	61.5	38.5	25-40
2.36	1387	8149	74.1	25.9	15-30
0.6	1201	9350	85.0	15.0	8-22
0.075	1344	10694	97.2	2.8	0-5

• The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2022-09-20-20** **Date: 22-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 20-06-22

Type of Mix : WMM (Wet Mix Macadam)

Date of Test : 20-06-22

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	395	395	3.6	96.4	95-100
22.4	2215	2610	23.7	76.3	60-80
11.2	2249	4859	44.2	55.8	40-60
4.75	2314	7173	65.2	34.8	25-40
2.36	1395	8568	77.9	22.1	15-30
0.6	1047	9615	87.4	12.6	8-22
0.075	956	10571	96.1	3.9	0-5

• The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2022-09-20-20** **Date: 23-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 21-06-22

Type of Mix : WMM (Wet Mix Macadam)

Date of Test : 21-06-22

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	248	248	2.3	97.7	95-100
22.4	2344	2592	23.6	76.4	60-80
11.2	2469	5061	46.0	54.0	40-60
4.75	2247	7308	66.4	33.6	25-40
2.36	1579	8887	80.8	19.2	15-30
0.6	1014	9901	90.0	10.0	8-22
0.075	758	10659	96.9	3.1	0-5

* The results obtained are satisfactory as per standard requirements.

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Page 1/1
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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2022-09-20-20** **Date: 23-06-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 21-06-22

Type of Mix : WMM (Wet Mix Macadam)

Date of Test : 21-06-22

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	322	322	2.9	97.1	95-100
22.4	2245	2567	23.3	76.7	60-80
11.2	2157	4724	42.9	57.1	40-60
4.75	2245	6969	63.4	36.6	25-40
2.36	1235	8204	74.6	25.4	15-30
0.6	1424	9628	87.5	12.5	8-22
0.075	985	10613	96.5	3.5	0-5

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR DENSE BITUMINOUS MACADAM

Lab ID : **CP-RW-2022-09-20-20** **Date: 01-07-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No.1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 28-06-22

Type of Mix : DBM (Dense Bituminous Macadam)

Date of Test : 28-06-22

Table 500-6 : Physical Requirements fo Coarse Aggregate for Dense Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	11.0	Combined Flakiness & Elongation Index for DBM is Maximum 35%	IS:2386 Part I
	Elongation Index	12.0		
Strength	Aggregate Impact Value	23.0	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.58	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.38	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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End of Report

TESTS RESULTS ON STABILITY OF MIX

Lab ID : **CP-RW-2022-09-20-20** **Date: 07-07-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK D/EPMT-08/W O/107/2021-22

Date of Receipt : 04-07-22

Type of Mix : BC (Bituminous Concrete)

Date of Test : 04-07-22

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

* The results obtained are satisfactory as per standard requirements.

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Lab ID : CP-RW-2022-09-20-20 **Date: 14-07-22**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 477

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	12	12	2.5	97.5	90-100
19	31	43	9.0	91.0	71-95
13.2	132	175	36.7	63.3	56-80
4.75	89	264	55.3	44.7	38-54
2.36	66	330	69.2	30.8	28-42
0.3	78	408	85.5	14.5	7-21
0.075	45	453	95.0	5.0	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 475

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	22	22	4.6	95.4	90-100
19	13	35	7.4	92.6	71-95
13.2	142	177	37.3	62.7	56-80
4.75	92	269	56.6	43.4	38-54
2.36	59	328	69.1	30.9	28-42
0.3	55	383	80.6	19.4	7-21
0.075	62	445	93.7	6.3	2-8

• The results obtained are satisfactory as per standard requirements.

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Lab ID : CP-RW-2022-09-20-20 Date: 18-07-22

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 477

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	15	15	3.2	96.8	90-100
19	29	44	9.3	90.7	71-95
13.2	135	179	37.6	62.4	56-80
4.75	85	264	55.4	44.6	38-54
2.36	65	329	69.0	31.0	28-42
0.3	73	402	84.2	15.8	7-21
0.075	50	451	94.6	5.4	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 475

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	16	16	3.4	96.6	90-100
19	20	36	7.6	92.4	71-95
13.2	135	171	36.1	63.9	56-80
4.75	85	256	54.0	46.0	38-54
2.36	70	326	68.7	31.3	28-42
0.3	60	386	81.2	18.8	7-21
0.075	57	443	93.2	6.8	2-8

• The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : CP-RW-2022-09-20-20 **Date: 14-07-22**

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No.1265, Ground Floor, IIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK D/EPMT-08/W O/107/2021-22

Date of Receipt : 13-07-22

Type of Mix : Tack coat

Date of Test : 13-07-22

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x 30	0.30 x 30
2	Area of Plate (a)	Sq mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq m	0.256	0.256
7	Average	Kg/sq m	0.256	
8	Specified Limit	Kg/sq m	0.250 Kg/sq m	

* The results obtained are satisfactory as per standard requirements

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Lab ID : CP-RW-2022-09-20-20

Date: 14-07-22

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	3	3	0.6	99.4	90-100
9.5	59	62	13.1	86.9	70-88
4.75	120	182	38.6	61.4	53-71
2.36	85	267	56.6	43.4	42-58
1.18	31	298	63.1	36.9	34-48
0.6	12	310	65.7	34.3	26-38
0.3	55	365	77.3	22.7	18-28
0.15	39	404	85.6	14.4	12-20
0.075	26	430	91.1	8.9	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 471

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	5	5	1.1	98.9	90-100
9.5	59	64	13.6	86.4	70-88
4.75	123	187	39.7	60.3	53-71
2.36	79	266	56.5	43.5	42-58
1.18	35	301	63.9	36.1	34-48
0.6	14	315	66.9	33.1	26-38
0.3	59	374	79.4	20.6	18-28
0.15	25	399	84.7	15.3	12-20
0.075	32	431	91.5	8.5	4-10

• The results obtained are satisfactory as per standard requirements.

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Lab ID : CP-RW-2022-09-20-20

Date: 16-07-22

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 471

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	7	7	1.5	98.5	90-100
9.5	56	63	13.4	86.6	70-88
4.75	122	185	39.3	60.7	53-71
2.36	79	264	56.1	43.9	42-58
1.18	32	296	62.8	37.2	34-48
0.6	15	311	66.0	34.0	26-38
0.3	42	353	74.9	25.1	18-28
0.15	52	405	86.0	14.0	12-20
0.075	25	430	91.3	8.7	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	6	6	1.3	98.7	90-100
9.5	55	61	12.9	87.1	70-88
4.75	119	180	38.1	61.9	53-71
2.36	57	237	50.2	49.8	42-58
1.18	32	269	57.0	43.0	34-48
0.6	32	301	63.8	36.2	26-38
0.3	52	353	74.8	25.2	18-28
0.15	54	407	86.2	13.8	12-20
0.075	22	429	90.9	9.1	4-10

• The results obtained are satisfactory as per standard requirements

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : CP-RW-2022-09-20-20

Date: 19-07-22

Project Name : Restoration and Improvements of Mahalakshmi layout, Balaji layout, Best County - II & III, Bhaskar Reddy, Andhra layout, thirumalanagara and surrounding areas in ward no - 03 of Yelahanka New Town Sub division (PACKAGE NO - 10)

Agency : M/s SMPL Asphalts (Pro B.B. Umesh), No;1265, Ground Floor, HIG B Sector, Yelahanka New Town, Bangalore - 560064

Customer Reference : BBMP/EE/YNK.D/EPMT-08/W.O/107/2021-22

Date of Receipt : 18-07-22

Type of Mix : BC (Basak Reddy Layout - Veerasagar Road)

Date of Test : 18-07-22

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	501	500
2	Weight of the sample After extraction	B	472	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.79	5.60
4	Average percentage	%	5.7	

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Lab ID : CP-RW-2022-09-20-20

Date: 19-07-22

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	1	1	0.2	99.8	90-100
9.5	65	66	14.0	86.0	70-88
4.75	102	168	35.6	64.4	53-71
2.36	82	250	53.0	47.0	42-58
1.18	41	291	61.7	38.3	34-48
0.6	22	313	66.3	33.7	26-38
0.3	49	362	76.7	23.3	18-28
0.15	25	387	82.0	18.0	12-20
0.075	40	427	90.5	9.5	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	2	2	0.4	99.6	90-100
9.5	66	68	14.4	85.6	70-88
4.75	101	169	35.8	64.2	53-71
2.36	85	254	53.8	46.2	42-58
1.18	42	296	62.7	37.3	34-48
0.6	23	319	67.6	32.4	26-38
0.3	51	370	78.4	21.6	18-28
0.15	28	398	84.3	15.7	12-20
0.075	34	432	91.5	8.5	4-10

• The results obtained are satisfactory as per standard requirements

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